

WHAT IS CLAIMED IS:

1. A friction engaging device, comprising:

a rotating drum which is a cylindrical rotating body, around a perimeter of which there is provided a friction member, and which is engaged with/disengaged from a predetermined coupling member via the friction member; and

a ring gear which is spline-coupled to an inner surface of the rotating drum and which is positioned while contacting an inward flange that is integrally provided with the rotating drum, wherein

a centrifugal oil passage which is formed between the ring gear and the inward flange, and which introduces lubricating oil inside the rotating drum to a spline-coupled portion of the ring gear and the rotating drum by centrifugal force, and a plurality of through holes which are formed in the rotating drum and through which the lubricating oil, that has flowed into the spline-coupled portion, flows to an outside of the rotating drum where the friction member is provided are formed.

2. The friction engaging device according to claim 1, wherein

the centrifugal oil passage is formed of a plurality of radius direction grooves formed in a radial pattern on an end face of the ring gear or the inward flange, and an axial direction oil passage which introduces the lubricating oil in the axial direction to the through holes is formed by forming a clearance between spline teeth in a portion of the spline-coupled portion, that corresponds to a periphery side end portion of the radius direction groove, the clearance in the portion being larger than a clearance in the other portion.

3. The friction engaging device according to claim 2, wherein

a plurality of protrusions are formed on at least one of the end face of the ring gear and the inward flange, and a clearance is formed between the end face of the ring gear and the inward flange such that the centrifugal oil passage is formed.

4. The friction engaging device according to claim 3, wherein

the ring gear and the inward flange are fixed to each other using a plurality of the protrusions.

5. The friction engaging device according to claim 2, wherein
a plurality of the radius direction grooves are formed on at least one of the ring gear and the inward flange.
6. The friction engaging device according to claim 2, wherein
the axial direction oil passage is formed by removing at least one spline tooth of the ring gear.
7. The friction engaging device according to claim 2, wherein
the axial direction oil passage is formed by reducing a height of at least one spline tooth of the ring gear.
8. The friction engaging device according to claim 2, wherein
the axial direction oil passage is formed by increasing a depth of at least one spline groove of the rotating drum.
9. The friction engaging device according to claim 2, wherein
the axial direction oil passage is formed in a portion that extends over to a far edge of the through hole, this portion including a portion corresponding to the through hole, and the clearance between the teeth in a portion extending from the far edge of the through hole is the same as that of the portion without the axial direction oil passage.
10. The friction engaging device according to claim 9, wherein
the axial direction oil passage is formed by removing a portion of at least one spline tooth of the ring gear, that extends over to the far edge of the through hole, this portion including the portion corresponding to the through hole.
11. The friction engaging device according to claim 9, wherein
the axial direction oil passage is formed by reducing a height of a portion of at least one spline tooth of the ring gear, that extends over to the far edge of the through hole, this portion including the portion corresponding to the through hole.
12. The friction engaging device according to claim 9, wherein

the axial direction oil passage is formed by increasing a depth of a portion of at least one spline groove of the ring gear, that extends over to the far edge of the through hole, this portion including the portion corresponding to the through hole.